Grade 5

Module 3: Instruction for Active Learning

Indicator 6: Monitoring student learning and adjusting teaching during instruction in response to student performance and engagement in learning tasks.

Goal: I will learn how to closely monitor student engagement and learning in my class to assist my fifth graders in developing deeper conceptual understandings of mathematics to make relevant decisions regarding their individual levels of understanding to ensure rigorous and meaningful learning tasks for all students.

Summary: As a first year fifth grade teacher with a wide variety of mathematical learners each with individual needs ranging from single digit addition facts to learning multiplication facts to multiplying and dividing fractions, I knew from the beginning of the year that differentiation would be the key to ensuring each student in my class is challenged each day to successfully master relevant and rigorous learning tasks. While I currently plan for differentiation daily for six students, I do not always take into account the differentiation that needs to take place whole group, small group, or individually during instruction based on each student's learning needs and engagement. I often find a discrepancy between what I have planned and how the lesson actually unravels dependent upon students' engagement and understanding. I find myself missing out on opportune moments to adjust instruction to meet the needs of all my students as I am so focused on following the original thoroughly planned objective. As a result, I am not addressing and adjusting student learning during instruction as effectively as I desire but rather waiting until the end of the lesson/skill to reflect on the activities and completed student tasks.

Reflection Paper: I strive to be a continually reflective teacher, considering not only what went well and what I could have changed in my lessons but *why* I believe this. In other words, I focus on my students to see how they responded to the lessons in terms of their understanding and engagement. Presently, I believe I am very conscientious in ensuring that I gauge students' performances on a daily basis, making minor adjustments during instruction to meet the needs of the whole class, small groups, or individual students. I believe I could use the instructional time much more effectively by meticulously observing students' execution of the learning tasks at hand and modifying the lesson right "then and there" to ensure I am teaching to their zone of proximity and not above or below their challenge levels.

I decided I wanted to focus on my sixty-minute mathematics block as that is the academic subject I feel there is such a range of learners that requires so much differentiation. Additionally, I have found that students have such large learning gaps in

their mathematical understandings that I seem to find out as I am implementing the lesson. By focusing on identifying these learning gaps earlier, focusing on going deeper into specific skills and objectives, and adjusting my instruction during the lessons, students will benefit in their understandings and time will be used much more effectively as I will be able to modify my instruction before the end of the lesson to analyze "exit cards" used to drive instruction the following day.

I began my new learning through conversing with our school numeracy coach. I found myself extremely frustrated with the introduction to a recent unit on adding and subtracting fractions with unlike denominators. During the daily lessons, I found I wasn't even able to get to the "core" of my lesson as students were missing crucial foundational skills. I shared my concerns and she talked with me about the importance of implementing pre-assessments. She informed me that through meticulously designing pre-assessments that not only match the specific skills and standards that I unwrapped from the Common Core Curriculum, I would be able to address those foundational skills and concepts needed to understand the objectives and lessons I had planned. She left me with the question, "How are you going to get your students to represent their current levels of understanding and their individual thinking processes". That is the goal of informative pre-assessments that will serve as a preventive measure from running into my frustration and serve as the essential component in driving my daily mathematics instruction.

Additionally, I read a chapter titled, "Considering Evidence of Learning in Diverse Classrooms" in Carole Tomlinson and Jay McTighe's book, Integrating Differentiated Instruction and Understanding by Design (2006). In this chapter, it states that pre-assessments should focus on the knowledge and skills but also states "pre-assessments should provide a window into important strengths and weaknesses that students bring to the study" (p.72). This proved to be significant to me as previously I had looked at pre-assessments as only showing me whether students already knew the specific skills or not. I had not considered using the pre-assessments as a glimpse into student thinking and addressing specific skills prior to designing lessons to address the pre-requisite skills prior to teaching the focus skills and objectives.

Taking this to heart, I scrupulously designed a pre-assessment on adding and subtracting fractions with unlike denominators. In addition to including examples and tasks requiring a specific correct answer, I asked students to explain why they chose to do as they did and how they went about solving it. Putting their work into words would allow me to see how they were thinking. I also included open-ended questions including "What is a fraction?" and "What is a denominator?". When students were finished and I was able to analyze them, I found that many of my exceptional learners could get the correct answers but not explain why or how they did it". I also found that many of my typical learners knew some of the skills but their deficiencies in their multiplication and division facts prevented them from arriving at an accurate solution. Many of them could not even provide a definition of a fraction nor identify where a fraction would be properly placed on a number line. Had I not assessed the students this thoroughly prior to beginning the unit, student progress and understanding would not have occurred, as

they would have been trying to understand and engage in learning tasks that would make no sense to them as they were missing the whole underlying conceptual understanding necessary to do so. In addition, I saved a lot of time that I would have spent modifying my lessons during class but instead could plan ahead of time for differentiation for the whole class, small groups, and individuals. Students were much more engaged during the lesson and apt to actively participate with their partners and small groups as I was teaching to their zones of proximal develop, allowing them "struggle time" but not so over their heads that they couldn't reach an understanding. I was able to continue to informally assess students through small group and partner discussions and facilitate that deeper conceptual understanding through asking questions requiring them to provide more understanding and assessing their own thinking more in depth.

Another major source of my new learning was through an article titled "Using Self-Assessment in Elementary Classrooms" by Gary Bingham, Teri Holbrook, and Laura Meyers published in *Phi Delta Kappan*, February 2010 (Vol. 91, #5, p. 59-61). This article emphasizes the importance of allowing students to self-assess themselves as "self assessment returns voice and ownership to students. In turn, the teacher is better able to support the needs of each student." Furthermore, it helps students to develop their metacognition as it literally requires them to think about their own thinking and understanding of the skill and concept they are presently exploring, manipulating, and expressing. Upon reflecting on these thoughts, I realized that my students do respond well to the informal assessing I currently incorporate into lessons. For example, I use a "thumbs up" or "thumbs down" measure or ask my students to put up their fingers (one finger meaning very little understanding to five fingers indicating a thorough understanding). However, I wanted to require them to assess themselves further and at a deeper level during the lesson to ensure I could adjust based on their self-assessments.

Based on this research, I implemented a "Self- Assessment Rubric" and also posted coordinating posters in my classroom so students can easily refer to them to gauge their understanding. The posters range from "I'm a Novice as I'm just beginning to learn this" to "I'm an Expert and feel comfortable teaching this to someone else". Additionally included are " I'm an Apprentice and starting to understand but need more help" and "I'm a Practitioner and can do most of it confidently on my own". These four terms, "Novice, Expert, Apprentice, and Practitioner", were introduced to me at a District Professional Development in which we spent time unwrapping standards and familiarizing ourselves with the Common Core Standards. The guest speaker asked the participating educators to self-assess ourselves several times throughout the presentation. As a participant experiencing this strategy, I felt it truly allowed me to recognize and comprehend my own understandings and recognize the skills I had mastered and the skills and concepts I was still struggling with. For these reasons, I decided it would be a meaningful technique to incorporate into my classroom.

My students really seized that idea of taking charge of their own learning. As fifth graders, they truly feel empowered when they are able to have control over various

aspects of their own learning including their assessment scores, progress made over time, and now self-assessing themselves throughout daily lessons. I put this technique into practice through two phases. Instead of having five-six students raise their hands during the independent component of the daily math lessons and say, "I don't get it" and unable to explain what they don't "get", the first phase included starting to require my students to state specifically what part or skill they specifically are struggling with. Both the students and I found this to be much more effect as time was not wasted trying to figure out where the misconception/trouble area was arising but rather students were being pro-active in seeing where they needed help and in doing so "walking" themselves through their own thinking process to see where they needed help. This has significantly decreased students helplessly raising their hands.

The second phase, was actually incorporating the specific self-assessment posters. After familiarizing students with the terms and their meanings, I started to incorporate them into lessons right after the Guided Practice component and then at the end of the Independent Practice components of my daily math lessons. Students now write on their individual white boards one of the four terms representing their conceptual understanding thus far "Novice, Apprentice, Practitioner, or Expert". This allows me to differentiate on the spot and direct the remainder of the lesson. I can quickly glance around the room and see if more guided practice is needed and whether there are "Expert students" that can help their peers. I can also see where I can allow certain students to start their Independent Practice and then call a small group over for more Guided Practice to help them further develop their understandings. It allows me to continue to keep the "struggle time" necessary for students to explore the concepts and skills to make meaning of them but also prevents students from helplessly sitting there without any understanding within their "zone of proximal developments" to even know where to start. Additionally, I ask students to assess themselves on the white boards at the end of the lessons to monitor their progress and see how their understandings and exposure has grown throughout the lesson and determine where my planning for the following math lesson needs to go the next day regarding differentiating for specific students, small groups, or whole class. I have found this to be extremely beneficial and will continue to implement it daily into my math lessons.

As a reflective educator, I am continuously thinking about the thorough and detailed lesson plans I create daily. I thought about how much time I am spending creating these lessons and how both, major and minor, adjustments are often needed while implementing these plans. I began to reflect on how I could incorporate a "back-up" plan as another way to be proactive in the frequent need to adjust to the needs of my students. In addition to planning for differentiating for individual students, I could plan for difficult questions and misconceptions as well as the exact direction I will take when this does occur with my class. I consulted Charlotte Danielson's *Implementing the Framework for Teaching* (2009). Component 3e "Lesson Adjustment" provided me with research that supported my idea. Danielson states that the distinguished teacher "probes students for additional information when students have difficulties so that the lesson adjustment accurately addresses the problem". Additionally, the essential message I took away from my reading was a statement of hers, "By anticipating areas

where students may have problems understanding, you can increase your flexibility and responsiveness by planning adjustments such as reteaching or increasing or decreasing the pace" (362). This motivated me to create an action flow plan within my lesson plan anticipating a range of learning to take pace as well as steps for my students to take next after determining their understanding. My action plan ranged from "rapid student learning for individual students" to "low whole-class understanding".

I employed my first lesson plan complete with a systematic action plan, equipped with a variety of adjustments to be made before it was even necessary when teaching a lesson on finding equivalent fractions. During the Guided Practice component of my mini-lesson, it was immediately obvious to me that some students had mastered the understanding of the concept and needed enrichment. For these students, I was able to instantly provide them with a performance task in which they had the opportunity to work with a partner to apply their understandings to develop deeper understandings while engaging in rigorous tasks. I continued with my Guided Practice, informally assessed my students, and found that while some understood the equivalent fraction concept, their basic multiplication fluency was preventing them accurately solving the presented activity. For these students, I created a small flex group and was able to go over multiplication strategies and using pictorial representations to find equivalent fractions. The other third of my class declared themselves "Apprentices" meaning they were beginning to understand but needed more practice. I draw from my prepacked "bag of tricks" and was able to reteach, explain a different way, and use manipulatives to facilitate deeper understandings. Through putting this action plan into practice, my students were all able to remain engaged in rigorous learning objectives while I made timely decisions to differentiate instruction. For this specific lesson, it worked that the groups fell into place and differentiating for small groups worked perfectly. My students profited from individualized instruction and tasks and it worked as an advantage for maximizing instructional time for each student. I will continue to develop my daily lesson plans with an action flow chart in which I plan for the various "routes" my students' learning can and will take daily.

My school holds weekly Data Team Meetings in which grade-level teams meet with coaches, consultants, and administrators to discuss the progress, strengths, weaknesses, and authentic assessments collected during the week based on the objectives we have meticulously created. I find these meetings to be advantageous as I am able to carefully analyze student work through formal assessment, authentic performance tasks, and exit cards providing me insight into individual student understanding. From looking at this data, we decide the next steps that need to be taken to ensure the maximum number of students are successfully mastering the objective, content, and skill. We also identify students in need of more instructional support and those students that need enrichment to further develop deeper understandings. The past few meetings, in combination with many math lessons, have emphasized the importance of flexible groups of students or "flex groups" in which students are grouped accordingly based on their understanding of a precise skill. These groupings change as lessons and units unravel and students' understandings and mastery of certain skills develop.

In Marzano's Classroom Instruction that Works (2001), he states in Chapter 7: Cooperative Learning, " Of all the classroom grouping strategies, cooperative learning may be the most flexible and powerful" (91). As I have implemented flex groups in my daily math lessons more and more, I have found my students have made significant gains in numerous ways- engagement, active learning, working cooperatively with others, and most importantly learning to discuss and share their thinking with each other as emphasized in the Common Core Standards. Flex groups have tremendously helped me in differentiating my daily instruction. However, Marzano also warns of overuse of cooperative learning groups. For this reason, I continue to implement an action plan in which I plan for differentiation and major and minor lesson adjustments for not just flex groups but individually and as a whole class as well. Utilizing all of these strategies I have learned about and incorporating simultaneously will allow to create maximum opportunities for students to excel in their achievement, mastery, and understanding of the rigorous objectives created from the fifth grade curriculum.

A quote that really insprired me by Carole Tomlinson is "Assessment is today's means of modifying tomorrow's instruction." While I do believe this to be true, I also think assessment is today's means of modifying *today's* instruction. Through informally assessing my students through whole group discussions, turn-and-talks with partners, and performance tasks, I am now able to adjust my instruction before the objective is completely beyond the students' zone of proximal development and rather address the class's misunderstandings and fill in the "gaps" or provide enrichment for students whom have already mastered the objectives before waiting until tomorrow to do so. This will help me maximize instructional learning time for each of my individual students.